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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/692,025

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EXAMINER

COLUCCI, MICHAEL C

ART UNIT

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2626

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DELIVERY MODE

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/692,025	Applicant(s) YI ET AL.	
	Examiner MICHAEL C. COLUCCI	Art Unit 2626	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 September 2008.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10,12 and 14-17 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 10,12 and 14-17 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 22 October 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☒ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. In view of the Appeal Brief filed on 09/02/2008, PROSECUTION IS HEREBY REOPENED. A new ground of rejection set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

/Richemond Dorvil/
Supervisory Patent Examiner, Art Unit 2626

Response to Arguments

2. Applicant's arguments, see Appeal Brief, filed 09/02/2008, with respect to the rejection(s) of claim(s) 10, 12, and 14-17 under 35 USC 103(a) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Boguraev et al. US 6185592 B1 (hereinafter Boguraev) in view of Chase US 6332143

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B1 (hereinafter Chase). Examiner has incorporated Boguraev in view of Chase to explicitly teach identification (within a document) of a subject/topic, subject terms, opinions, opinion terms, parts of speech, most relevant terms, dictionaries, etc.

Drawings

3. The drawings are objected to because Fig. 1 does not illustrate the steps within claim 10, wherein the “most relevant feature terms” extracted are initially not “most relevant” to anything during the first step 10 of Fig. 1. Fig. 1 does not demonstrate where/how a “subject” 12 is defined, wherein there is no antecedent basis for step 12’s “subject”. Fig. 1 as is merely demonstrates the extraction of feature terms not relevant to anything.

4. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as “amended.” If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an

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application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 101

5. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claim 10 is rejected under 35 U.S.C. 101 because:

Claim 10 does not fall within one of the four statutory categories of invention.

Supreme Court precedent¹ and recent Federal Circuit decisions² indicate that a statutory "process" under 35 U.S.C. 101 must (1) be tied to another statutory category (such as a particular apparatus), or (2) transform underlying subject matter (such as an article or material) to a different state or thing. While the instant claim(s) recite a series of steps or acts to be performed, the claim(s) neither transform underlying subject matter nor positively tie to another statutory category that accomplishes the claimed method steps, and therefore do not qualify as a statutory process.

¹ *Diamond v. Diehr*, 450 U.S. 175, 184 (1981); *Parker v. Flook*, 437 U.S. 584, 588 n.9 (1978); *Gottschalk v. Benson*, 409 U.S. 63, 70 (1972); *Cochrane v. Deener*, 94 U.S. 780, 787-88 (1876).

² *In re Bilski*, 88 USPQ2d 1385 (Fed. Cir. 2008).

Claim 10 recites purely mental steps and would not qualify as a statutory process. In order to qualify as a statutory process, the method claim should positively recite the other statutory class to which it is tied (i.e. apparatus, device, product, etc.). For example, the method steps of claim 10 appear to recite mental steps such as “extracting opinion terms about a subject of interest from a text document” and do not identify an apparatus that performs the recited method steps, such as a computer implemented method as described in the specification (present invention spec. page 6).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 10, 12, and 14-17 are rejected under 35 U.S.C. 103(a) as being unpatentable over Boguraev et al. US 6185592 B1 (hereinafter Boguraev) in view of Chase US 6332143 B1 (hereinafter Chase).

Re claim 10, Boguraev teaches a method for extracting opinions about a subject of interest from a text document having a plurality of sentences, the subject associated with a plurality of features (Col. 10 line 19 - Col. 11 line 26), the method comprising:

extracting from the document feature terms (Col. 5 lines 1-8) related to the features most relevant to the subject (Col. 10 line 19 - Col. 11 line 26);

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for each sentence referring to a feature term (Col. 10 line 19 - Col. 11 line 26),
determining whether the sentence includes an opinion polarity about the feature term;
an

for each sentence referring to the subject (Col. 10 line 19 - Col. 11 line 26),
determining whether the sentence includes an opinion polarity about the subject,

wherein the determining comprises identifying opinion terms in the sentence
using an opinion dictionary, each entry in the dictionary having an opinion term, a part-
of-speech tag, and an associated opinion polarity,

for each sentence having a feature term and an opinion term, parsing the
sentence with an English parser to identify grammatical components in the sentence
and relationships between said components (Col. 10 line 19 - Col. 11 line 26), and
identifying an opinion polarity associated with said feature term using the opinion
dictionary

However, Boguraev fails to teach determining whether the sentence includes an
opinion polarity about the feature term

identifying opinion terms in the sentence using an opinion dictionary, each entry
in the dictionary having an opinion term, a part-of-speech tag, and an associated
opinion polarity

identifying an opinion polarity associated with said feature term using the opinion
dictionary

Chase teaches one denotative field is assigned to the word or phrase. A second denotative field is assigned to the denotative context (dictionary meaning) of the word or phrase. A third denotative field is assigned to the part of speech. Preferably, each context of each word is assigned a separate database record. Thus, if the dictionary definition of a single word has two meanings among a total of five denotative contexts, then there are five records, one for each context. There may be multiple contexts for a given dictionary meaning when, for example, there are different parts of speech for the word/meaning. (Chase Col. 7 lines 23-43).

Further, Chase teaches connotative meanings for any given term are identified from a range of emotional descriptor terms. There are a plurality of predefined categories of emotional descriptors. In one embodiment described below for the English language there are 8 categories. In the preferred embodiment there are four categories of positive emotions (e.g., affection/friendliness, enjoyment/elation, amusement/excitement and contentment/gratitude) and four categories of negative emotions (e.g., sadness/grief, anger/loathing, fear/uneasiness, and humiliation/shame). Within each category there are a predefined list of emotional descriptors. A term may have a connotative meaning in any or all of the emotional categories. Some terms may not have any connotative meaning. In some embodiments only one emotional descriptor is permitted to be assigned for a given emotional category for a given term. Thus, for an eight category embodiment, any term can have 0 to 8 emotional descriptors--the emotional descriptors being from different emotional categories. In other embodiments a primary and a secondary emotional descriptor may be assigned

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for any given term. For such an embodiment, which is based on 8 emotional categories, any term can have 0-16 emotional descriptors--the emotional descriptors being in pairs, where the two emotional descriptors in a given pair being for a given emotional category. Different pairs include emotional descriptors for different emotional categories (Chase Col. 4l lines 9-36 & Fig. 4-7).

Furthermore, Chase teaches word relationship with one another, wherein one term will describe another term (i.e. lonely people) within the context of the emotion of a document (Fig. 6 and 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Boguraev to incorporate determining whether the sentence includes an opinion polarity about the feature term, identifying opinion terms in the sentence using an opinion dictionary, each entry in the dictionary having an opinion term, a part-of-speech tag, and an associated opinion polarity, identifying an opinion polarity associated with said feature term using the opinion dictionary as taught by Chase to allow for an overall summary of a document both topically and emotionally from a narrow or global analysis, wherein the relationship of words to one another allows for the proper identification of emotion/opinion of a document (Chase Col. 4l lines 9-36).

Re claim 12, Boguraev fails to teach the method as recited in claim 10, wherein the opinion polarity associated with the feature term is identified based on an opinion rule.

Chase teaches one denotative field is assigned to the word or phrase. A second denotative field is assigned to the denotative context (dictionary meaning) of the word or phrase. A third denotative field is assigned to the part of speech. Preferably, each context of each word is assigned a separate database record. Thus, if the dictionary definition of a single word has two meanings among a total of five denotative contexts, then there are five records, one for each context. There may be multiple contexts for a given dictionary meaning when, for example, there are different parts of speech for the word/meaning. (Chase Col. 7 lines 23-43).

Further, Chase teaches connotative meanings for any given term are identified from a range of emotional descriptor terms. There are a plurality of predefined categories of emotional descriptors. In one embodiment described below for the English language there are 8 categories. In the preferred embodiment there are four categories of positive emotions (e.g., affection/friendliness, enjoyment/elation, amusement/excitement and contentment/gratitude) and four categories of negative emotions (e.g., sadness/grief, anger/loathing, fear/uneasiness, and humiliation/shame). Within each category there are a predefined list of emotional descriptors. A term may have a connotative meaning in any or all of the emotional categories. Some terms may not have any connotative meaning. In some embodiments only one emotional descriptor is permitted to be assigned for a given emotional category for a given term.

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Thus, for an eight category embodiment, any term can have 0 to 8 emotional descriptors--the emotional descriptors being from different emotional categories. In other embodiments a primary and a secondary emotional descriptor may be assigned for any given term. For such an embodiment, which is based on 8 emotional categories, any term can have 0-16 emotional descriptors--the emotional descriptors being in pairs, where the two emotional descriptors in a given pair being for a given emotional category. Different pairs include emotional descriptors for different emotional categories (Chase Col. 41 lines 9-36 & Fig. 4-7).

Furthermore, Chase teaches word relationship with one another, wherein one term will describe another term (i.e. lonely people) within the context of the emotion of a document (Fig. 6 and 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Boguraev to incorporate the opinion polarity associated with the feature term is identified based on an opinion rule as taught by Chase to allow for an overall summary of a document both topically and emotionally from a narrow or global analysis, wherein the relationship of words to one another allows for the proper identification of emotion/opinion of a document (Chase Col. 41 lines 9-36).

Re claim 14, Boguraev fails to teach the method as recited in claim 12, wherein the rule base comprises a plurality of rules each having a relationship term, a target of the opinion, and a polarity of the opinion.

Chase teaches one denotative field is assigned to the word or phrase. A second denotative field is assigned to the denotative context (dictionary meaning) of the word or phrase. A third denotative field is assigned to the part of speech. Preferably, each context of each word is assigned a separate database record. Thus, if the dictionary definition of a single word has two meanings among a total of five denotative contexts, then there are five records, one for each context. There may be multiple contexts for a given dictionary meaning when, for example, there are different parts of speech for the word/meaning. (Chase Col. 7 lines 23-43).

Further, Chase teaches connotative meanings for any given term are identified from a range of emotional descriptor terms. There are a plurality of predefined categories of emotional descriptors. In one embodiment described below for the English language there are 8 categories. In the preferred embodiment there are four categories of positive emotions (e.g., affection/friendliness, enjoyment/elation, amusement/excitement and contentment/gratitude) and four categories of negative emotions (e.g., sadness/grief, anger/loathing, fear/uneasiness, and humiliation/shame). Within each category there are a predefined list of emotional descriptors. A term may have a connotative meaning in any or all of the emotional categories. Some terms may not have any connotative meaning. In some embodiments only one emotional descriptor is permitted to be assigned for a given emotional category for a given term. Thus, for an eight category embodiment, any term can have 0 to 8 emotional descriptors--the emotional descriptors being from different emotional categories. In other embodiments a primary and a secondary emotional descriptor may be assigned

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for any given term. For such an embodiment, which is based on 8 emotional categories, any term can have 0-16 emotional descriptors--the emotional descriptors being in pairs, where the two emotional descriptors in a given pair being for a given emotional category. Different pairs include emotional descriptors for different emotional categories (Chase Col. 4I lines 9-36 & Fig. 4-7).

Furthermore, Chase teaches word relationship with one another, wherein one term will describe another term (i.e. lonely people) within the context of the emotion of a document (Fig. 6 and 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Boguraev to incorporate the rule base comprises a plurality of rules each having a relationship term, a target of the opinion, and a polarity of the opinion as taught by Chase to allow for an overall summary of a document both topically and emotionally from a narrow or global analysis, wherein the relationship of words to one another allows for the proper identification of emotion/opinion of a document (Chase Col. 4I lines 9-36).

Re claim 15, Boguraev fails to teach the method as recited in claim 12, wherein the rule base comprises a plurality of rules each having a relationship term, a source of the opinion, and a target of the opinion.

Chase teaches one denotative field is assigned to the word or phrase. A second denotative field is assigned to the denotative context (dictionary meaning) of the word or phrase. A third denotative field is assigned to the part of speech. Preferably, each

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context of each word is assigned a separate database record. Thus, if the dictionary definition of a single word has two meanings among a total of five denotative contexts, then there are five records, one for each context. There may be multiple contexts for a given dictionary meaning when, for example, there are different parts of speech for the word/meaning. (Chase Col. 7 lines 23-43).

Further, Chase teaches connotative meanings for any given term are identified from a range of emotional descriptor terms. There are a plurality of predefined categories of emotional descriptors. In one embodiment described below for the English language there are 8 categories. In the preferred embodiment there are four categories of positive emotions (e.g., affection/friendliness, enjoyment/elation, amusement/excitement and contentment/gratitude) and four categories of negative emotions (e.g., sadness/grief, anger/loathing, fear/uneasiness, and humiliation/shame). Within each category there are a predefined list of emotional descriptors. A term may have a connotative meaning in any or all of the emotional categories. Some terms may not have any connotative meaning. In some embodiments only one emotional descriptor is permitted to be assigned for a given emotional category for a given term. Thus, for an eight category embodiment, any term can have 0 to 8 emotional descriptors--the emotional descriptors being from different emotional categories. In other embodiments a primary and a secondary emotional descriptor may be assigned for any given term. For such an embodiment, which is based on 8 emotional categories, any term can have 0-16 emotional descriptors--the emotional descriptors being in pairs, where the two emotional descriptors in a given pair being for a given

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emotional category. Different pairs include emotional descriptors for different emotional categories (Chase Col. 4I lines 9-36 & Fig. 4-7).

Furthermore, Chase teaches word relationship with one another, wherein one term will describe another term (i.e. lonely people) within the context of the emotion of a document (Fig. 6 and 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Boguraev to incorporate the rule base comprises a plurality of rules each having a relationship term, a source of the opinion, and a target of the opinion as taught by Chase to allow for an overall summary of a document both topically and emotionally from a narrow or global analysis, wherein the relationship of words to one another allows for the proper identification of emotion/opinion of a document (Chase Col. 4I lines 9-36).

Re claim 16, Boguraev fails to teach the method as recited in claim 15, wherein the target of the opinion is a component of the sentence to which the opinion is to be assigned.

Chase teaches one denotative field is assigned to the word or phrase. A second denotative field is assigned to the denotative context (dictionary meaning) of the word or phrase. A third denotative field is assigned to the part of speech. Preferably, each context of each word is assigned a separate database record. Thus, if the dictionary definition of a single word has two meanings among a total of five denotative contexts, then there are five records, one for each context. There may be multiple contexts for a

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given dictionary meaning when, for example, there are different parts of speech for the word/meaning. (Chase Col. 7 lines 23-43).

Further, Chase teaches connotative meanings for any given term are identified from a range of emotional descriptor terms. There are a plurality of predefined categories of emotional descriptors. In one embodiment described below for the English language there are 8 categories. In the preferred embodiment there are four categories of positive emotions (e.g., affection/friendliness, enjoyment/elation, amusement/excitement and contentment/gratitude) and four categories of negative emotions (e.g., sadness/grief, anger/loathing, fear/uneasiness, and humiliation/shame). Within each category there are a predefined list of emotional descriptors. A term may have a connotative meaning in any or all of the emotional categories. Some terms may not have any connotative meaning. In some embodiments only one emotional descriptor is permitted to be assigned for a given emotional category for a given term. Thus, for an eight category embodiment, any term can have 0 to 8 emotional descriptors--the emotional descriptors being from different emotional categories. In other embodiments a primary and a secondary emotional descriptor may be assigned for any given term. For such an embodiment, which is based on 8 emotional categories, any term can have 0-16 emotional descriptors--the emotional descriptors being in pairs, where the two emotional descriptors in a given pair being for a given emotional category. Different pairs include emotional descriptors for different emotional categories (Chase Col. 41 lines 9-36 & Fig. 4-7).

Furthermore, Chase teaches word relationship with one another, wherein one term will describe another term (i.e. lonely people) within the context of the emotion of a document (Fig. 6 and 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Boguraev to incorporate the target of the opinion is a component of the sentence to which the opinion is to be assigned as taught by Chase to allow for an overall summary of a document both topically and emotionally from a narrow or global analysis, wherein the relationship of words to one another allows for the proper identification of emotion/opinion of a document (Chase Col. 41 lines 9-36).

Re claim 17, Boguraev fails to teach the method as recited in claim 15, wherein the source of the opinion is a component of the sentence of which opinion polarity is to be assigned to the target.

Chase teaches one denotative field is assigned to the word or phrase. A second denotative field is assigned to the denotative context (dictionary meaning) of the word or phrase. A third denotative field is assigned to the part of speech. Preferably, each context of each word is assigned a separate database record. Thus, if the dictionary definition of a single word has two meanings among a total of five denotative contexts, then there are five records, one for each context. There may be multiple contexts for a given dictionary meaning when, for example, there are different parts of speech for the word/meaning. (Chase Col. 7 lines 23-43).

Further, Chase teaches connotative meanings for any given term are identified from a range of emotional descriptor terms. There are a plurality of predefined categories of emotional descriptors. In one embodiment described below for the English language there are 8 categories. In the preferred embodiment there are four categories of positive emotions (e.g., affection/friendliness, enjoyment/elation, amusement/excitement and contentment/gratitude) and four categories of negative emotions (e.g., sadness/grief, anger/loathing, fear/uneasiness, and humiliation/shame). Within each category there are a predefined list of emotional descriptors. A term may have a connotative meaning in any or all of the emotional categories. Some terms may not have any connotative meaning. In some embodiments only one emotional descriptor is permitted to be assigned for a given emotional category for a given term. Thus, for an eight category embodiment, any term can have 0 to 8 emotional descriptors--the emotional descriptors being from different emotional categories. In other embodiments a primary and a secondary emotional descriptor may be assigned for any given term. For such an embodiment, which is based on 8 emotional categories, any term can have 0-16 emotional descriptors--the emotional descriptors being in pairs, where the two emotional descriptors in a given pair being for a given emotional category. Different pairs include emotional descriptors for different emotional categories (Chase Col. 41 lines 9-36 & Fig. 4-7).

Furthermore, Chase teaches word relationship with one another, wherein one term will describe another term (i.e. lonely people) within the context of the emotion of a document (Fig. 6 and 7).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the system of Boguraev to incorporate the source of the opinion is a component of the sentence of which opinion polarity is to be assigned to the target as taught by Chase to allow for an overall summary of a document both topically and emotionally from a narrow or global analysis, wherein the relationship of words to one another allows for the proper identification of emotion/opinion of a document (Chase Col. 4I lines 9-36).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US 6968332 B1, US 7028250 B2, US 7130879 B1.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Colucci whose telephone number is (571)-270-1847. The examiner can normally be reached on 9:30 am - 6:00 pm, Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil can be reached on (571)-272-7602. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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